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ning of each regular issue of the PCT Gazette.*

(54) Title: A HIGH RESOLUTION TYPING SYSTEM FOR PATHOGENIC BORRELIA

(57) Abstract: MLVA methods for strain discrimination among globally diverse *Borrelia* isolates including *B. burgdorferi*, *B. afzelii*, and *B. garinii* are disclosed. Ten VNTR loci have been identified from genomic and plasmid sequences of *Borrelia* strains and primer pairs suitable for amplifying the VNTR by PCR are disclosed. Polymorphisms at these loci were used to resolve genotypes into distinct groups. The resolution of 30 unique genotypes into five to seven distinct groups is demonstrated. This sub-typing scheme is useful for the epidemiological study of *Borrelia* and may be applied to the local detection of the pathological causative agent of Lyme Disease.



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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/21153

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : C07H 19/00, 21/00, 21/02, 21/04; C12Q 1/00, 1/68; C12P 19/34; A61K 39/00, 39/02, 39/38

US CL : 536/22.1, 23.1, 23.7, 24.3; 435/4, 6, 91.2; 424/184.1, 190.1, 234.1

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 536/22.1, 23.1, 23.7, 24.3; 435/4, 6, 91.2; 424/184.1, 190.1, 234.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO98/58943 A1 HUMAN GENOME SCIENCE, INC.) 30 December 1998. Borrelia burgdorferi polynucleotides and sequences. sequence listing sequence#8, claim 1, page 55.	1-5
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Y		6-24

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

## \* Special categories of cited documents:

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**Continuation of B. FIELDS SEARCHED Item 3:**

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